

# A systematic review of intervention programs that produced changes in speed and explosive strength in youth footballers

- Cossio-Bolaños M.<sup>a</sup>
- Vidal-Espinoza R.<sup>b</sup>,
- Albornoz C.U.<sup>c</sup>
- Portella D.L.<sup>d</sup>
- Vega-Novoa S.<sup>e</sup>
- Mendez-Cornejo J.<sup>a</sup>
- Lopez J.F.<sup>f</sup>,
- Gomez-Campos R.<sup>g</sup>

## **Abstract**

A soccer player should possess a reasonable level of different skills and abilities, so the playing position, level of training, style of play, physical and physiological demands can influence his performance. The objective was to identify the intervention programs that have been applied in search of generating positive effects on explosive strength and speed in young soccer players, as well as to identify the percentage of improvement among soccer players. A bibliographic study of systematic review was carried out. Following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) statement, bibliographic searches were performed in the PubMed database. The following descriptors were used: Explosive Strength, soccer players, jump performance, CMJ, SJ, VJ, Plyometrics, power, speed, sprint, kicking speed, change of direction speed, soccer player, football and training, intervention. Articles were included only if they were original articles, studied populations of young soccer players and showed an intervention program related to explosive strength and speed. Six studies were identified that applied intervention programs to look for changes in speed and explosive strength in young soccer players. In the 5m speed tests, significant changes were observed, improving from (0.26 to 0.53m/s), 10m speed (0.07 to 0.27m/s), 20m speed (0.08 to 1.92m/s) and 40m speed (0.25 to 0.62m/s). In explosive strength, performance in the test squat jump SJ (4.1 to 8.6cm), countermovement jump CMJ (1.0 to 8.8cm), horizontal jump HJ (12.17 to 24.4cm) and vertical jump VJ (5.0 to 11.0cm). Speed and explosive strength are relevant components of athletic performance and can be improved through training programs that include 20 to 40min sessions, training two to five times per week over a period of approximately 6 to 9 weeks. © 2021 PAGEPress Publications. All rights reserved.

## **Author keywords**

Explosive strength; Soccer; Speed; Training; Youth